

Claims

1. A mounting and dismounting mechanism for a straightening or calibrating roller (7) rotatable about a spindle (1) and provided with a circular groove (13), comprising at least one holder element (8), the roller (7) being adapted to be mountable and clampable by means of the holder element (8) around the spindle (1), and to be dismountable and removable from around the spindle (1) co-directionally with a longitudinal axis (A) of the spindle (1), **characterized** in that the spindle (1) is formed with a cylindrical cavity (4), having its wall (3) provided with an opening, the holder element (8) being adapted to move therein between clamping and release positions thereof, respectively protruding and not protruding from the outer surface of the spindle, that the cavity (4) is provided with a pusher (9) adapted to be movable between clamping and release positions thereof, and said pusher (9) being formed with a thrust face (9a, 9b) for the holder element (8), and a power unit (10) forcing the pusher (9) to shift from its release position to its clamping position, the thrust face (9a, 9b) of the pusher (9) using the force of the power unit (10) to move the holder element (8) from its release position to its clamping position, and that the pusher (9) is associated with a plunger (11), whereby the pusher (9) is movable against the force of the power unit (10) from its clamping position to its release position, the holder element (8) being thus capable of shifting from its clamping position to its release position.
- 25 2. A mechanism as set forth in claim 1, **characterized** in that the pusher (9) has its clamping position and release position axially spaced from each other, and that the thrust face (9a, 9b) is at an acute angle relative to the longitudinal axis (A) of the spindle (1).

3. A mechanism as set forth in claim 1 or 2, **characterized** in that the spindle (1) comprises a stationary spindle and the roller (7) is provided with a bearing (6).
- 5     4. A mechanism as set forth in any of claims 1-3, **characterized** in that the spindle (1) comprises a rotatably pivoted spindle.
5. A mechanism as set forth in any of claims 1-4, **characterized** in that the spindle (1) has its end provided with a reduced diameter spindle extension  
10     (3a) for giving the roller (7) a preliminary alignment and, hence, for guiding the inner track of the bearing (6) or the roller (7) smoothly around the spindle (1).
6. A mechanism as set forth in any of claims 1-5, **characterized** in that the  
15     plunger (11) comprises a push rod, extending from the cavity (4) and having its end provided with an extension (11a) having a diameter which is smaller than the inner diameter of the bearing (6).
7. A mechanism as set forth in any of claims 2-6, **characterized** in that the  
20     acute angle between the thrust face (9a, 9b) and the longitudinal axis (A) increases towards the distal end of the pusher (9), and that the thrust face section (9a) having a smaller angle bears against the holder element (8) in the clamping position of the latter.
- 25     8. A mechanism as set forth in any of claims 1-4, **characterized** in that the holder element (8) comprises a ball.
9. A mechanism as set forth in any of claims 1-8, **characterized** in that the number of holder elements (8) and complementary openings in the wall (3) of  
30     the cavity (4) is more than one, preferably three, spaced from each other by an angular distance.

10. A mechanism as set forth in any of claims 1-9, **characterized** in that the power unit (10) comprises a mechanical spring, a section of its length being fitted in a cavity established within the pusher (9).

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11. A mechanism as set forth in any of claims 1-10, **characterized** in that the cavity (4) is cylindrical and the pusher (9) comprises a piston type element.

10 12. A mechanism as set forth in any of claims 1-11, **characterized** in that none of its components need be removed from the mechanism for the process of replacing the rollers (7) and the bearing (6).